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# ABSTRACT

A data communication system, such as a local area network, is provided with a capability of transmitting isochronous data. Preferably the system conveys both isochronous data and non-isochronous data by time-multiplexing the data into a recurring frame structure on a four-bit nibble basis. Switching of data is handled using switching tables. The tables can be updated by a processor. Updates can be performed asynchronously so that the processor does not have to wait until the switch tables are in an unused updatable state before outputting the update information. An efficient encoding scheme permits transmission of both isochronous and non-isochronous data over existing media, such as twisted pair, without degrading bandwidth previously achieved for non-isochronous data over the same media, such as using an Ethernet system. The arriving data is de-multiplexed at the hub into separate channels for handling the separate streams by appropriate hardware.

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